cautious however in relying too implicitly on the portions relating to the structure and development of the sexual organs and the fruit, where we notice some serious errors, apparently of carelessness. The engravings are poor, but at the very low price of the book (one shilling) we could hardly expect an elaborate work. It is well worth the money.

NOTES AND NEWS.

PROFESSOR CHAS. R. BARNES received the degree of Ph. D. at the last Commencement of his *Alma Mater*.

THE FOURTH VOLUME of Saccardo's Sylloge Fungorum, which includes 3,583 species belonging to the Hyphomycetes, has just been issued.

A CHEMICAL STUDY of Yucca angustifolia has been made by Helen C. DeS. Abbott of which reprints from the transactions of the Amer. Philosophical Society have been distributed.

J. C. ARTHUR received the doctorate in science during the recent commencement at Cornell University. The subject of the thesis presented was "History and biology of the pear blight."

MR. A. B. SEYMOUR, for the past year Professor of Botany in the University of Wisconsin, has resigned that position to accept the curatorship of the cryptogamic herbarium of Harvard University.

THE BIOGRAPHICAL SKETCH of the late Dr. Tuckerman in the Amherst *Record*, from which the GAZETTE notice was condensed, was written by Professor Goodell and not by Professor Tyler as was stated.

THE JUNE NUMBER of the *Pharmaceutische Rundschau* contains an interesting paper by Prof. J. M. Maisch on Mühlenberg as a botanist. We regret that lack of space prevents our giving extracts from the lecture.

MR. L. G. YATES, of Santa Barbara, Calif., is preparing a catalogue of all known ferns giving synonymy, habitat, etc. He will gladly receive and give credit for any information concerning new species, new habitats, etc.

BOTANISTS WHO have fruiting specimens of any species of Dentaria will confer a favor by sending them to Dr. Sereno Watson, Botanic Garden, Cambridge, Mass., who will be glad to repay postage and return specimens if desired.

IN THE SMITHSONIAN REPORT for 1884, just issued, Professor Theodore Gill, in his scientific record for that year in zoology, includes Myxomycetes among the Protozoans. In the bibliography of zoology, Zopf's "Die Pilzthiere oder Schleimpilze" is included.

OWING TO AN unlooked for increase in the subscription list of the GAZETTE the January issue for this year has been entirely exhausted. Unless copies can be obtained from those who have duplicates the subscriptions now coming in will have to begin with some later number.

IT IS NOTED with pleasure that the University of North Carolina has conferred the degree of LL.D. upon Dr. A. W. Chapman, of Apalachicola, Fla., and Mr. H. W. Ravenel, of Aiken, S. C. A tardy but well deserved compliment to these most eminent southern botanists.

DR. W. G. FARLOW has contributed notes on arctic algæ to the proceedings of the Amer ican Academy. They are especially interesting in the study of distribution. The collections were made by several American explorers, but principally by Mr. L. M. Turner Ungava bay.

SOME INTERESTING abnormal forms of Vaucheria are illustrated by Douglas H. Ca m bell in the *Amer. Naturalist* for June. The positions of the oögonia of V. geminata, var. racemosa are variously occupied by clusters of oögonia and vegetative filaments, and th antheridium in one case is replaced by a vegetative filament.

THE WEEDS against which the weed law of Wisconsin is directed are "Canada thistles, burdock, teasel, white daisy and snap dragon." There has been some doubt in the minds of the people regarding the particular plants to which these names apply, and Professor A. B. Seymour has done an excellent service in the interpretation which he has given in the third report of the Agric. Experiment Station of that state. The paper also contains much information about the habits of the plants, the history of their introduction into this country, and methods to be used in their extermination.

CALYPSO BOREALIS has not usually been credited with the possession of coralline roots. These were pointed out to Dr. Gray several years ago by Mr. Hitchings, of Boston, and the fact was called to mind lately by seeing such roots on fine specimens of this beautiful orchid brought to the Botanic Garden at Cambridge from the White Mts. by Dr. Goodale.

FROM A STUDY of Mahernia verticillata Mr. Meehan has been led to suggest as a theoretical explanation of many opposed stamens that they are developed from axial buds at the base of the petals. He does not mean to deny that in such case the stamen is not a phyllome structure, but that this structure is developed on an arrested branch and hence axillary.

THE WHOLE of Dr. M. C. Cooke's extensive herbarium of fungi has become the property of the British government, as we learn from *Grevillea*, and has been transferred to the Royal Gardens at Kew. It will be incorporated with the general collection, which is a wise thing to do. The collection of the Rev. M. J. Berkeley is at the same place, but kept distinct.

THE PROCEEDINGS of the sixth meeting of the Society for the Promotion of Agricultural Science (1885) has come to hand. It contains the following botanical articles: Vitality of seeds buried in the soil, W. J. Beal; The demands made by agriculture upon the science of botany, C. E. Bessey; Notes on injurious fungi of California, W. G. Farlow; The dandelion and the lettuce, E. R. Sturtevant; Variation in cultivated plants, W. W. Tracy.

A NUMBER of bacterial diseases of lepidopterous larvæ have been distinguished and carefully studied by Professor S. A. Forbes, of Illinois University. Artificial cultures of the bacteria were made, and the disease communicated from these to healthy larvæ. Descriptions and measurements of the bacteria are given, and the micrococcus producing flacherie in the cabbage worm is illustrated with photographs. This paper forms one of the bulletins of the Illinois State Laboratory of Natural History.

A REPORT on fruit blights and diseases of fruit trees made to the government of New Zealand by Professor T. Kirk shows that the people of that country are awake to the economic value of systematic observation and investigation in this subject. The report deals mostly with the depredations of insects. From it we learn that the most serious enemy of the apple is known as the American blight, which is a woolly aphis. What is called fire blight in the pear has no resemblance to the fire blight of this country, but is due to a parasitic fungus, a species of Rœstelia. The principal obstacle to successful peach culture is the peach blight. Thousands of acres of peach orchards have been destroyed by it, and from being one of the most common fruits in the colony, it has now become the rarest. The cause is not known, but it does not appear to be due to insects. It bears no resemblance to our peach yellows. The peach yellows and pear blight of this country have not been observed in New Zealand.